

Application Serial No. 10/037,390  
Group Art Unit 2124

### REMARKS

This Amendment is intended to be a complete response to the Office Action of January 17, 2003 and the case is believed to be in condition for allowance. Accordingly, reconsideration is respectfully requested.

#### The Drawings

Applicants thank the Examiner for approving the proposed drawing changes that were submitted with the preliminary amendment on October 23, 2001.

#### Real Party in Interest.

The real party in interest is Schlumberger Technologies, Inc., the assignee of the patent application.

#### Related appeals and interferences.

This application is not subject to any other appeals or interferences.

#### Status of Claims.

Applicants note that misnumbered claims 145-188 have been renumbered 106-149 by the Examiner.

Claims 106-149 are pending in the application. Claims 106-149 were rejected in the Office Action. Claims 106, 108, 133, 143 and 149 are amended herein.

#### Summary of the Invention

The invention is a microcontroller, an integrated circuit card, and a method having in common making it possible to develop applications (Fig. 2, Ref. No. 20) for the microcontroller or integrated circuit card (Fig. 2, Ref. No. 10) using a high level language and standard programming tools (Fig. 2, Ref. No. 22). The invention includes a converter (Fig. 2, Ref. No. 26) that accepts as input the output (Fig. 2, Ref. No. 24) from the standard programming tools. The converter converts the output – or compiled form – into programs derived from the output of the standard programming tools into a form suitable for being interpreted by an interpreter (Fig. 1, Ref. No. 16) configured to

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interpret programs in the converted form. In one embodiment of the invention, the converter (Fig. 3, Ref. No. 26) converts strings to identifiers.

#### Issues

1. Whether claims 108-110 are indefinite under 35 USC 112, second paragraph.
2. Whether claims 106-149 are unpatentable over claims 1-87 of U.S. Patent No. 6,308,3317 under the doctrine of obviousness-type double patenting.
3. Whether claims 106-118, 120-128, 130-143, 145, 147, and 149 are anticipated by Peyret (US. Pat. No. 5,923,884) under 35 USC 102(e).

#### Grouping of the Claims

Group I: Claims 106-114, 118, 120-126.

Group II: Claims 115-117, 127-128, 133-142, 143, 145, 147, 149

Group III: Claims 119, 129, 144, 146, 148

Group I claims stand and fall together. Group II claims stand and fall together. Group III claims stand and fall together.

#### Argument

*Grouping of the claims. Group I:* Claim 106 is representative of this group. Claim 106 recites the limitations of "a derivative application ...derived [by] converting the compiled form [of the application] into a converted form" and "an interpreter configured to interpret derivative applications in the converted form."

*Group II:* The claims in Group II, directly or indirectly, contain similar limitations to the Group I claims related to a converter for converting compiled form programs and an interpreter suitable for interpreting such converted form of the programs. Thus, Group II claims stand with Group I claims. However, Group II claims recited further limitations by the virtue of which they do not fall with the Group I claims. Notably, Group II claims recite limitations dealing with the conversion of strings to identifiers. Claim 143 is representative of this group. It recites "the converting step including modifying byte

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code operands from references using identifying strings to references using unique identifiers."

*Group III:* Group III claims recite that the converting step comprises at least one step of the steps of "recording all jumps and their destinations in the original byte codes; converting specific byte codes into equivalent generic byte codes or vice-versa; modifying byte code operands from references using identifying strings to references using unique identifiers; and renumbering byte codes in the compiled form to equivalent byte codes in the format suitable for interpretation" (Claim 119, representative of the group). Only the Group III claims are subject to the double patenting rejection.

Issue 1: 35 USC 112, second paragraph

The Examiner rejected claims 108-110 as being indefinite. In particular, Claim 108 depended from itself.

Claim 108, from which 109 and 110 depend, has been amended to indicate that it depends from Claim 107. As amended, it no longer depends on itself. Thus, the rejection of that claim is moot. Applicants respectfully request withdrawal of the 35 USC 112, second paragraph rejection.

Issue 2: The Double Patenting Rejection

Claims 106-149 were rejected under the judicially created doctrine of obviousness-type double patenting as unpatentable over claims 1-87 of U.S. Patent No. 6,308,317.

This instant application and U.S. Patent No. 6,308,317 are both assigned to Schlumberger Technologies, Inc. Applicants have accordingly enclosed herewith a terminal disclaimer in compliance with 37 CFR 1.321(c) including the fee specified by 37 CFR 1.20(d). Applicants respectfully submit that this terminal disclaimer overcomes the double patenting rejection.

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35 USC 102

Claims 106-118, 120-128, 130-143, 145, 147 and 149 were rejected under 35 U.S.C. 102(e) as being anticipated by Peyret et al. (U.S. Patent Number 5,923,884). Applicants traverse the rejection.

*Group I:* Anticipation under 35 U.S.C. 102(e) requires that "each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros., Inc. v. Union Oil Co.*, 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987).

Several limitations of the Group I claims may add patentable weight thereto and Applicants do not concede that Peyret teaches or suggests any one limitation recited by these claims. That said, Applicants wish to focus the Examiner's attention on one particular distinguishing feature, namely, the converter that converts the compiled form of an application into a form suitable for interpretation by a specialized interpreter that interprets derivative applications in the converted form.

Taking Java as an example, the prior art programming and execution sequence of a program includes three steps: writing a program in the high level Java language, compiling the program into a compiled form, and interpreting the compiled form on a Java Virtual Machine. Applicants concede these steps to be in the prior art, for example, as stated in the statement from Peyret quoted in the Office Action ("the applets run through the interpreter so that the applets do not have any direct access to the hardware of the smart card", Peyret, Col. 5, lines 44-46, quoted at Office Action, Page 4) and as taught by Rodley (cited in the office action only to indicate inherent features of the Java programming language).

Applicants recognized the difficulty in operating Java (or other high level language) programs within the limited resources of an integrated circuit card or other microcontroller. To solve that problem, Applicants introduced the additional step of converting the compiled form from a Java compiler into a form suitable for interpretation on a specialized interpreter. Peyret does not teach or suggest this additional step.

In the form of Claim 106 prior to the amendments herein, Claim 106 recited "and then converting the compiled form into a converted form". The Examiner pointed to Peyret Fig. 1, the abstract ("which indicates that the system uses applets", Office Action,

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page 4), and col. 1 lines 4-16, 59 – 67 and col. 5 lines 59-67. Applicants have not found one hint of "converting the compiled form into a converted form" in these passages of Peyret. Figure 1 of Peyret merely shows a smart card architecture having a ROM, a RAM, an NVM (non-volatile memory) all connected to a CPU, which in turn is connected to an I/O line. To infer that Peyret teaches or suggests, "converting the compiled form into a converted form" from Figure 1 is impossible.

The Abstract of Peyret states the following:

A system for loading an applet and its associated use rights into a smart card having other applets with associated use rights with values that change as the application is used is provided that stores, remotely from said smart card, an applet and use rights with a predetermined initial value, associated with the applet, and has a smart card having a processing unit, and a memory unit, the memory unit being connected to the processing unit and storing a second application having use rights. The smart card may be connected to said remote storage means, and the application, having use rights with a predetermined value, may be loaded from said remote storage means into said smart card. A smart card is also provided having a processor for executing an application, a memory, connected to the processor, for storing multiple applications, including a first application having first use rights and having first values associated with the first use rights, the first value changing from a predetermined initial value with use of the first use rights, a system for loading in the smart card a second application from a remote location over an interface, the second application having second use rights, a system for storing said second application into said memory in said smart card, and a system for changing the use rights of said first application and said second application. A method of replenishing the use rights in a smart card is also provided.

Thus, the Abstract deals with the loading of applets and associated use rights, the architecture of the smart card. It concerns the use rights of the smart card, the changing of the use rights and of loading a second application onto the smart card. There is absolutely no hint of converting compiled applets into another form.

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Col. 1, lines 4 – 16 describes a smart card as being a plastic, credit card-sized card having a semiconductor chip for executing simple programs. The passage further describes some of the applications of smart cards. The passage does not describe how these programs are created. Therefore, it is not surprising that there is no hint of converting compiled programs into another form.

Col. 1, lines 59-67 states that "permanent smart cards have use rights that may be replenished", gives some examples of permanent smart cards, and states that "these permanent smart cards have more memory for multiple applets and the use rights on the smart card may be separately and independently replenished." Again, there is no suggestion of how applets are created and, therefore not surprisingly, no suggestion of converting a compiled form into a converted form.

Col. 5, lines 59-67 is interesting because it teaches away from Applicants' invention. The passage states, "to execute an applet on an interpreter, as shown, source code 46 of an applet is compiled into a byte code 48. The byte code may then be executed by any interpreter on any smart card." Thus, Peyret teaches that the compiled form of the applet is executed by the smart card interpreter. In contrast to that teaching, Applicants have introduced "converting the compiled form into a converted form" and "an interpreter configured to interpret derivative applications in the converted form". Peyret does not teach these limitations. It is improper to infer such a teaching from the disclosure of Peyret.

In rejecting Claims 112-113, the Examiner makes the statement that "the converter being inherent via col. 1 lines 33-52 and col. 5 lines 48-58." The Examiner has not met the legal standard for finding that a limitation is inherent in a reference. It is well established law that "if the prior art reference does not expressly set forth a particular element of the claim, that reference still may anticipate if that element is 'inherent' in its disclosure. To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.'" *In re Robertson and*

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*Scripps*, 169 F.3d 743, 49 USPQ2d, 1949, 1950-1951 (Fed. Cir. 1999) citing, *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 1268, 20 U.S.P.Q.2d 1746, 1749 (Fed. Cir. 1991). The Examiner has failed to point to any extrinsic evidence that would make clear that the converter is necessarily present in the system described in Peyret and that the converter would be so recognized by a person of ordinary skill in the art. Accordingly, Applicants respectfully request that the Examiner withdraw any allegations that the converter is inherent in Peyret as that contention does not meet the legal standard set forth by the Federal Circuit in *Continental Can* and, further, in *In re Robertson and Scripps*. (A good recent discussion on inherency is Irving N. Feit and Christina L. Warrick, Inherency in Patent Law, 85 Journal of the Patent and Trademark Office Society 5 (January 2003)).

For these reasons, Applicants respectfully submit that the Examiner has not made out a proper case of anticipation under 35 USC 102(e) of the Group I claims. Accordingly, Applicants request the withdrawal of the rejection of the Group I claims and their early allowance.

*Group II:* The Group II claims recite similar limitations to the Group I claims and therefore stand with the Group I claims. Furthermore, these claims recite additional limitations, for example, as set forth in Claim 143, "the converting step including modifying byte codes operands from references using identifying strings to references using unique identifiers." As noted above in support of the Group I claims, Peyret does not teach or suggest expressly or inherently a converter. It is therefore not surprising that Peyret also fails to teach or suggest this novel and non-obvious conversion step. For this reason Applicants respectfully request withdrawal of the rejection of the Group II claims and their early allowance.

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CONCLUSION

It is submitted that all the claims now in the application are allowable. Applicants respectfully request reconsideration of the application and claims and its early allowance. If the Examiner believes that the prosecution of the application would be facilitated by a telephonic interview, Applicants invite the Examiner to contact the undersigned at the number given below.

The only fee believed due in connection with this Response is the fee for the Terminal Disclaimer as has been indicated on the enclosed Fee Transmittal Form. If Applicants are in error as to these fees, the Commissioner is hereby authorized to charge any fees that may be required, or credit any overpayment, to Deposit Account 19-0597.

Respectfully submitted,



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Date: April 17, 2003

Enclosures:

1. Facsimile Cover Sheet (1 page)
2. Transmittal Form (1 page)
3. Certificate of Transmission by Facsimile (1 page)
4. Amendment Transmittal Letter in duplicate (2 pages)
5. Certificate of Transmission by Facsimile (1 page)
6. Terminal Disclaimer (1 page)
7. Fee Transmittal Form (1 page)

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